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UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

*Management Plans Lassen
Forest Management Record.* May 4 1925.

REPORT ON CRUISE OF CUT-OVER AREA
FRUIT GROWERS SUPPLY COMPANY'S SALE

4-3-22

Season 1924.



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Forest Management Record
F.G.S.Co. Sale 4-3-22

May 4, 1925.

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FRUIT GROWERS SUPPLY COMPANY'S SALE
4-3-22

Season 1924

A. E. Wieslander
A. E. WIESLANDER
Forest Examiner

Approved:

W. G. DURBIN
Forest Supervisor

(Date)

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" " R.S.

Introduction.

This report, on the first cut-over cruise on this sale, should be of interest in showing to what extent the provisions of the Management Plan have been carried out in regard to marking practice, etc.

Method of Cruise.

The same method, as explained in the "Report on Cruise of Cut-Over Area, Lassen Lumber & Box Company's Sale 11-16-17, Season of 1924, by A. E. Wieslander, under date of March 21, 1925", was used in the cruise on this sale.

Area Cruised.

A total of 85.2 acres of strip was taken in sections 12, 13, and 14, T. 31 N., R. 9 E. This locality is not typical of the sale area as a whole, which is predominately site IV, Yellow Pine type, but it is typical of site III, Yellow Pine-Fir type, in which type and site practically all cutting has been confined to date. Some areas cruised last year were eliminated from consideration as not being typical of this site and type.

Results of the Cruise.

The following comparison between the cut-over areas on the Lassen Lumber & Box Company's Sale and this sale is given as the best way of bringing out conditions of the cut-over land.

COMPARISON OF CUT-OVER AREA LASSEN LUMBER & BOX CO. SALE AND FRUIT GROWERS SUPPLY CO. SALE

.....

	F.G.S.CO. SALE		L.L. & B.CO. SALE	
1. Original Stand	: Type - Yellow Pine, Fir	: Site III	: Type - Pure Yellow Pine.	: Site IV
	: Stand per acre 34,210	: 55% pine, 45% fir.	: Stand per acre 16,810	: 100% pine.
	: 11% pine, 89% fir.			
	: Area covered, 20%.	: (Stocking)	: Area covered, 36%.	: (Stocking)
	: Poles 4-11" D.B.H.		: Poles 4-11" D.B.H.	
	: No. of trees per acre---	: 19.07.	: No. of trees per acre---	: 11.94.

F.G.S.CO. SALE		L.L. & B. CO. SALE	
2. Stand left in marking (cont'd)	14% pine, 86% fir. Merchantable Timber Stand per acre, 8,610 ft. B.M. % of original stand, 25% 54% pine, 46% fir.	Merchantable Timber Stand per acre, 2,450 ft. B.M. % of original stand, 15.	
3. Logging Methods Area log- ged	79% Big Wheels (horse drawn) 21% Boom Donkeys	95% Big Wheels (horse drawn) 5% Jammer Skidding	
4. Logging damage to merchant- able stand	Big Wheels Stem injuries to 7 trees in 100. Donkeys Stem injuries to 26 trees in 100.	Big Wheels including area jammer skidded; Stem injuries to 2 trees in 100.	
5. Brush burning damage	Trees Killed 0-6" - 15 in 100 6-3" - 4 " 100 4-11" - 7 " 100 12" + -0.5 " 100 Catfaced 4-11" 1.2 " 100 12" + 3.3 " 100 (all fir)	Trees Killed 0-6" - 13 in 100 6-3" - 10 " 100 4-11" - 1.8 " 100 12" + -0.1 " 100 Catfaced None	
6. Character of marking	Diseased 4.3 trees in 100 2.4% of volume Defective 1.9 trees in 100 1.3% of volume Intermediate & Suppressed 12.2 trees in 100 1.8% of volume	Diseased 0.2 trees in 100 0.1% of volume Defective 0.5 trees in 100 0.0% of volume Intermediate & Suppressed 1.5 trees in 100 0.2% of volume	
7. Composition of future stand based on the number of Isolated, Dominant, and Co- dominant trees only:	Poles 18% pine 82% fir Merchantable Stand 35% pine 65% fir Reproduction 89% fir	Poles Pure pine Merchantable Stand Pure pine	

	F.B.S.Co. Sale	L.L. & B.Co. Sale
8. Distribution and density of reproduct ion.	<u>Reproduction</u> 2613 trees per acre on 17% of area. 48 trees per acre on 83% of area. Average for entire area: 470 per acre. Stocking on basis of 6.5 x 6.5 spacing 20%.	<u>Reproduction</u> 2399 trees per acre on 26% of area. 139 trees per acre on 74% of area. Average for entire area 714 per acre. Stocking on basis of 6.5 x 6.5 spacing 36%.
9. Distribution and density of poles is reserved stand based on number of trees.	<u>Poles</u> <u>Pine</u> 7% Isolated 47% Dominant 19% Codominant 73% Total <u>Fir</u> 3% Isolated 40% Dominant 21% Codominant 64% Total <u>Merchantable Timber</u> <u>Pine</u> 43% Isolated 44% Dominant 8% Codominant 95% Total <u>Fir</u> 10% Isolated 57% Dominant 17% Codominant 84% Total	<u>Poles</u> <u>Pine</u> 10% Isolated 57% Dominant 19% Codominant 86% Total <u>Merchantable Timber</u> <u>Pine</u> 36% Isolated 58% Dominant 5% Codominant 99% Total
10. Losses subsequent to logging	Following losses out of a total of 4309 YP trees: and 11,920 WF trees; Lightning - None Insects - None Windfall - YP 5 Fir 82	Following losses out of a total of 7573 trees: Lightning - 6 Insects - 3 Windfall - 5

Note: Small amount of lodgepole pine on F. B. S. Co. Sale has been omitted in this comparison.

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Comments on Comparison.

1. Original Stand.

The original stand on sections 12, 13, and 14, is much heavier than the average stand on the sale area as a whole, which will closely approximate that on the Lassen

Lumber & Box Company's Sale.

2. Stand Left.

The Management Plan contemplates a cutting of 80% of the stand on the area as a whole, but that on certain areas, as little as 70% of the stand will be taken in order to compensate for areas where it will be necessary to cut 85% of the stand.

A reserved stand of 8,610 feet B.M., per acre, which is 25% of the original stand, clearly indicates that the marking is in accordance with the Management Plan. *part*

That cutting in fir has been approximately as heavy as in pine, is shown by the almost unchanged proportion of fir in both the original and reserved stands.

3. Logging Methods Employed.

The area logged by boom donkeys was adapted for tractor logging and could have been logged by this method had such equipment been available and required.

4. Logging Damage.

The heavier cut per acre is the cause of the greater stem injury in big wheel logging on the Fruit Growers Sale. While some of the stem injury is caused directly by the wheels, the most of it is the result of falling in heavy stands. On the Lassen Sale, where the stand is open, there is little injury to reserved trees in falling.

Assuming that stem injuries to 6 trees in 100 are due to falling, which must be approximately correct in view of 7 such injuries per 100 in wheel logging, one tree out of every five has been hit in donkey skidding. The area logged has even slopes that are not steep so the minimum amount of damage for the method employed should result. Not knowing how the damage compares with donkey logging elsewhere, we are not prepared to say whether it is excessive or not. However, we hope, by more intensive supervision, to reduce this average on the relatively small areas on this sale that will have to be logged by donkeys in the future.

5. Brush Burning Damage.

The greater damage to poles and merchantable timber on this sale, is not the result of less care in burning, but largely to the presence of punky fir logs which hold fire indefinitely and carry it into groups of poles or merchantable timber, resulting in some of these trees being cat-faced or killed. The damage shown for this class of trees is effective damage, as defective and suppressed trees were not considered.

One would naturally expect a greater difference in the amount of damage to reproduction between the two sales than is shown, because of the much heavier stand on the Fruit

Growers Sale. That this is not the case, is the result of two factors on the Fruit Growers Sale:- (1), more reproduction swamped out in logging, and (2), better placing of brush piles. Brush piles were placed better because piling was done after the logs were taken out.

6. Character of Marking.

The marking does not show up quite so well on this sale.

The diseased, defective, and thinning trees, (intermediate and suppressed), are practically all fir and confined largely to the lower diameter classes where volume is negligible. These trees are easily overlooked in the dense stands unless marking is slowed up considerably. Thinnings were intentionally slighted in donkey areas to reduce damage, and in wheel areas because of a feeling that excessive windfall would result.

In the proposed modification of marking practice in fir, these trees, as well as many additional ones of the same kind, would be left.

7. Composition of Future Stand.

It is evident that we must be reconciled to a much greater proportion of fir in the second cut in this type and site.

8. Distribution and Density of Reproduction.

The density of stocking of reproduction on the Fruit Growers Sale, prior to logging, was probably greater than that in the Lassen Lumber & Box Company's Sale. The much lower stocking, shown after logging on the Fruit Growers Sale, is the result of the greater amount of swamping required in heavy stands.

The distribution of reproduction ~~of~~ ^{on} the Fruit Growers Sale is not as good as on the Lassen. This is also due to the difference in amount of swamping required between open and dense stands.

9. Distribution and Density of Poles and Merchantable Timber.

As on the Lassen Lumber & Box Company's Sale, the distribution of pine on this sale is excellent.

Considering the tolerance of fir, its distribution is also good, as the suppressed and intermediate trees represent less than 2% of the volume.

It is indicated that the fir poles occur largely in crowded groups.

10. Losses Subsequent to Logging.

Windfall in fir appears to be the only serious source of loss on this site and type. Practically all of the

windfall shown occurred in the spring of 1923. Scarcely none occurred the following spring, but from observations in sections 12, 13, and 14 this spring, it is evident that the windfall loss this past winter is as great if not greater than in 1923.

APPENDIX

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Land District. Mag. Declin.

Area -

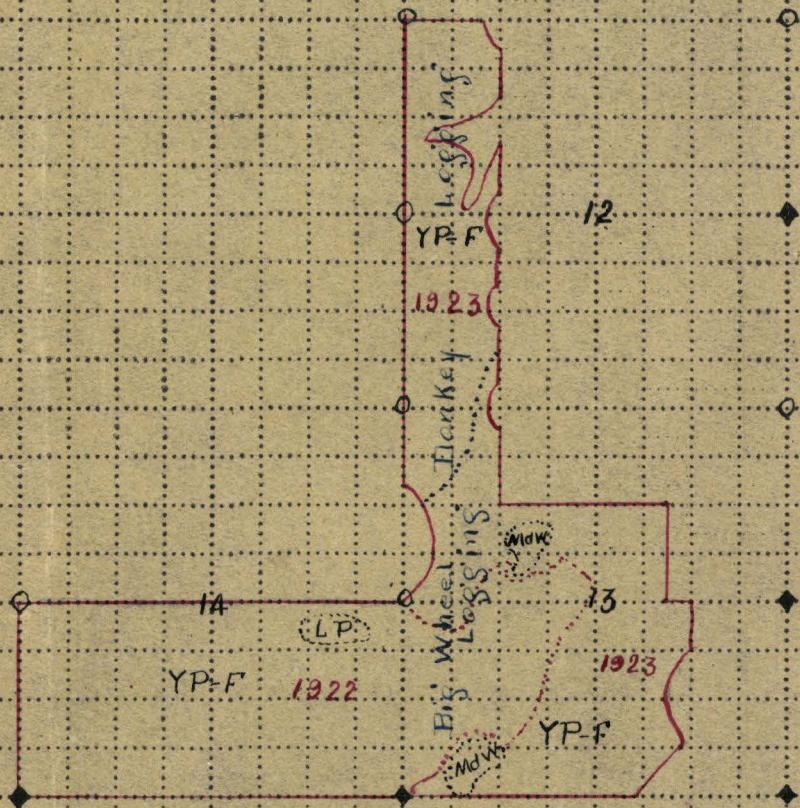
.Acres

(Case designation.)

Secs. 12, 13, & 14

(Subdivision and section.)

T. 31 N. R. 9 E. Mer. Scale 2 inches = 1 mile



LEGEND.

Boundary of area cruised.
1923. Cutting boundary - year cut.
79% Big wheel Logging 21% Donkey Logging.

Field work by

, Date

, Platted by

Remarks:

Approved _____, 19_____,

(Approving officer.)

TABLES NO. 1-A, 1-B, 1-C, & 1-D.
REPRODUCTION CONDITIONS

YELLOW PINE - FIR TYPE SITE III. BASIS 88 1/10 ACRE PLOTS.

TABLE NO. 1-A. DISTRIBUTION OF REPRODUCTION.

AREA SEGREGATION	NUMBER OF TREES 0-3" D.B.H.	PER ACRE	AREA COVERED ACRES	PERCENT
TOTAL				
Fully Stocked	3830	2613	1.466	17
Under Stocked	309	42	7.334	83
Total Area	4139	470	8.800	100

TABLE NO. 1-B. DENSITY OF STOCKING

AREA SEGREGATION	NUMBER OF TREES 0-3" D.B.H.	PER ACRE	AREA COVERED ACRES	PERCENT
TOTAL				
Stocked	4139	2332	1.775	20
Not Stocked	0	0	7.025	80
Total Area	4139	470	8.800	100

TABLE NO. 1-C. SPECIES REPRESENTED.

	NUMBER OF TREES PER ACRE				TOTAL	
	YELLOW PINE	WHITE FIR	NO.	%	NO.	%
0-6	41	12	297	84	352	100
6-3	10	8	102	87	118	100
Total	51	11	398	85	470	100

TABLE NO. 1-D. AVERAGE HEIGHT OF REPRODUCTION.

CLASS	YELLOW PINE	WHITE FIR
0-6'	2.5 feet	2.6 feet
6'-3"	7.4 "	9.8 "

^oIncludes small amount of Sugar Pine.

^{oo}Includes small amount of Incense Cedar and Red Fir.

TABLE NO. 2-A. HEALTH OF RESERVED STAND.

YELLOW PINE - FIR TYPE. SITE III. BASIS 85.2 ACRES OF STRIP

NUMBER OF TREES PER ACRE										: TREES ON	
										: WHICH NO	
										: INCREMENT	
D.B.H. : S & H : : (LOGGING) : :	S I : : (LOGGING) : :	B T : : (LOGGING) : :	Cf. : M : :	Cf. : B : :	DIS. : : : :	DEF. : M : :	TOTAL : : : :	CAN BE STAND : EXPECTED			
4	.79	---	.01	---	---	---	.80	.01			
6	.67	.04	.01	.01	---	---	.73	.03			
8	.43	.01	---	.01	---	.01	.46	.01			
10	.63	.04	.01	.02	---	.01	.72	.01			
Total	2.52	.09	.03	.04	---	.02	.01	2.71	.06		
Per 100	93.	3.3	1.1	1.5	---	.7	.4	100%	2.2%		
12	.47	.04	.02	.04	---	.01	---	.58	.03		
14	.56	---	.01	---	---	.02	.01	.60	---		
16	.27	.02	.01	.05	---	---	.01	.36	.03		
18	.26	.04	.04	---	---	---	---	.34	.01		
20	.24	.01	---	.02	---	.02	---	.29	.02		
22	.28	.02	---	.02	---	---	---	.32	.00		
24	.16	.05	.01	.04	---	.01	---	.27	.00		
26	.31	.02	---	.06	---	---	---	.39	.01		
28	.26	.02	---	.02	---	---	---	.30	.00		
30	.32	.01	---	.01	---	.01	---	.35	.01		
32	.19	.02	.01	.04	---	---	---	.26	.00		
34	.15	.02	---	.06	---	.01	---	.24	.01		
36	.22	.01	---	.04	---	---	---	.27	.00		
38	.16	---	---	.02	---	---	---	.18	.00		
40	.09	---	---	.01	---	---	---	.10	.00		
Over	.11	---	---	.01	---	---	---	.12	.00		
Total	4.05	.28	.10	.44	---	.08	.02	4.97	.12		
Per 100	81.5	5.6	2.0	8.9	---	1.6	.4	100%	2.4%		

TABLE NO. 2-B. HEALTH OF RESERVED STAND.

SPECIES WHITE FIR. SITE III YELLOW PINE - FIR TYPE.

BASIS 85.2 ACRES STRIP.

NUMBER OF TREES PER ACRE										NO. INCREMENT TREES
D.B.H.	S & H: (LOGGING)	S I (LOGGING)	B T (LOGGING)	Cf. M	Cf. B	DIS.	DEF. M	TOTAL STAND		
4	5.99	.09	.06	---	.01	.04	---	6.19		.18
6	3.76	.21	.11	---	.07	.02	.01	4.18		.36
8	2.41	.18	.11	---	.05	.13	.02	2.90		.48
10	2.37	.22	.20	---	.11	.20	.01	3.09		.65
Total	14.53	.70	.48		.24	.39	.04	16.36		1. 67
Per 100	89.0	4.3	2.9		1.5	2.4	.2	100.0		10.2
12	2.44	.35	.19	---	.11	.20	---	3.28		.78
14	1.87	.22	.19	---	.13	.13	.06	2.60		.71
16	1.07	.21	.18	---	.08	.14	.05	1.72		.63
18	1.08	.14	.06	---	.08	.05	.07	1.48		.35
20	.92	.16	.02	---	.05	.08	.04	1.27		.36
22	.74	.12	.05	---	.04	.01	.04	1.00		.26
24	.56	.08	.01	---	.04	.06	.04	.79		.21
26	.35	.07	---	---	.04	.01	---	.47		.12
28	.39	.07	---	---	.02	.01	---	.49		.10
30	.24	.01	---	---	.02	.02	.02	.31		.08
32	.15	.04	---	---	.01	.01	---	.21		.05
34	.01	---	---	---	---	---	---	.01		.00
36	.07	.01	---	---	---	---	.01	.09		.02
38	.01	.01	---	---	---	---	.01	.03		.02
40	.01	---	---	---	---	---	---	.01		.00
Over	.03	---	---	---	---	---	---	.03		.00
Total	9.94	1.49	.70	---	.62	.72	.34	13.79		3.69
Per 100	72.0	10.8	5.1	---	4.5	5.2	2.4	100		26.8

° It was assumed that in practically all diseased and injured fir, decay would offset increment, so this column includes trees of this kind which were not classified according to crown classes.

TABLE NO. 3-A. PROBABLE CROWN CLASSIFICATION OF RESERVED STAND AT THE TIME OF NEXT CUT (70 YEARS).

SPECIES YELLOW PINE. SITE III YELLOW PINE - FIR TYPE.

BASIS 85.2 ACRES OF STRIP.

D.B.H.	NUMBER OF TREES PER ACRE						TOTAL
	ISOLATED: DOMINANT		CO-: DOMINANT	INTER-: MEDIANTE	SUP-: PRESSED		
	DOMINANT	MEDIANTE	PRESSED				
4	.02	.43	.15	.13	.06		.79
6	.02	.28	.15	.19	.06		.70
8	.05	.18	.09	.11	.02		.45
10	.10	.35	.12	.09	.05		.71
Total	.19	1.24	.51	.52	.19		2.65
%	7.2	46.8	19.2	19.6	7.2		100
12	.05	.28	.13	.05	.04		.55
14	.16	.28	.06	.06	.04		.60
16	.13	.12	.06	.02	---		.33
18	.08	.14	.05	.02	.04		.33
20	.05	.19	.02	---	.01		.27
22	.11	.20	.01	---	---		.32
24	.15	.08	.04	---	---		.27
26	.15	.22	.01	---	---		.38
28	.13	.17	---	---	---		.30
30	.21	.13	---	---	---		.34
32	.18	.08	---	---	---		.26
34	.14	.09	---	---	---		.23
36	.21	.06	---	---	---		.27
38	.16	.02	---	---	---		.18
40	.08	.02	---	---	---		.10
Over	.08	.04	---	---	---		.12
Total	2.07	2.12	.38	.15	.13		4.85
%	42.7	43.7	7.8	3.1	2.7		100

TABLE NO. 3-B. PROBABLE CROWN CLASSIFICATION OF RESERVED STAND AT THE TIME OF NEXT CUT (70 YEARS).

SPECIES WHITE FIR. SITE III YELLOW PINE - FIR TYPE

BASIS 85.2 ACRES OF STRIP.

D.B.H.	NUMBER OF TREES PER ACRE						TOTAL
	ISOLATED	DOMINANT	CO-DOMINANT	INTERMEDIATE	SUPERIOR	PRESSED	
4	.11	2.34	1.29	1.14	1.13		6.01
6	.11	1.35	.80	.76	.80		3.82
8	.11	1.04	.43	.24	.60		2.42
10	.12	1.08	.50	.36	.38		2.44
Total	.45	5.81	3.02	2.50	2.91		14.69
%	3.1	39.6	20.6	17.0	19.7		100
12	.09	.87	.59	.48	.47		2.50
14	.12	.95	.48	.20	.14		1.89
16	.05	.72	.18	.12	.02		1.09
18	.06	.78	.20	.05	.04		1.13
20	.09	.64	.14	.04	---		.91
22	.11	.55	.07	.01	---		.74
24	.11	.42	.05	---	---		.58
26	.12	.22	.01	---	---		.35
28	.11	.26	.02	---	---		.39
30	.07	.16	---	---	---		.23
32	.05	.11	---	---	---		.16
34	---	.01	---	---	---		.01
36	.02	.05	---	---	---		.07
38	---	.01	---	---	---		.01
40	.01	---	---	---	---		.01
Over	.02	.01	---	---	---		.03
Total	1.03	5.76	1.74	.90	.67		10.10
%	10.2	57.1	17.2	8.9	6.6		100

TABLE NO. 4. CHARACTER OF MARKING.

SPECIES YELLOW PINE AND WHITE FIR. SITE III.
BASIS 85.2 ACRES OF STRIP.

D.B.H. INCHES	DIS.		DEF.		TOTAL STAND		LAT.		NANT		DOMI		CO-		INTER-		SUP-		TOTAL	
	LEFT	NO. OF TREES PER ACRE	ED	NANT	DOMI	MEDIATE	PRES	SED	NO. OF TREES PER ACRE	DOMI	MEDIATE	PRES	SED	NO. OF TREES PER ACRE	DOMI	MEDIATE	PRES	SED	NO. OF TREES PER ACRE	
12	5.4	---	3.86	4.6	37.7	23.6		16.7	17.4										3.05	
14	4.7	2.2	3.20	11.3	49.8	21.9		10.5	6.5										2.47	
16	6.7	2.9	2.08	12.7	59.1	16.9		9.9	1.4										1.42	
18	2.8	3.8	1.82	9.6	63.0	17.1		4.8	5.5										1.46	
20	6.4	2.6	1.56	11.9	70.3	13.5		3.4	0.9										1.18	
22	0.8	3.0	1.32	21.5	70.1	7.5		0.9	---										1.07	
24	6.6	3.8	1.06	30.6	58.8	10.6		---	---										.85	
26	1.2	---	.86	37.0	60.3	2.7		---	---										.73	
28	1.3	---	.78	35.2	62.0	2.8		---	---										.71	
30	4.5	3.0	.66	49.2	50.8	---		---	---										.57	
32	2.1	---	.47	54.8	45.2	---		---	---										.42	
34	4.0	---	.25	58.3	41.7	---		---	---										.24	
36	---	2.8	.36	67.6	32.4	---		---	---										.34	
38	---	4.8	.21	84.2	15.8	---		---	---										.19	
40	---	---	.11	81.8	18.2	---		---	---										.11	
Over	---	---	.15	64.3	35.7	---		---	---										.14	
TOTAL	4.3	1.9	18.75	20.8	52.8	14.2		7.0	5.2										14.95	
Total by Volume			Bd. Ft.																Bd. Ft.	
	2.4	1.3	8610	47.7	46.2	4.3		1.1	0.7										7260	

TABLE NO. 5. DAMAGE IN LOGGING
SECTIONS 12, 13 and 14. FRUIT GROWERS SUPPLY CO. SALE

LOGGING METHOD	SPEC- IES	SIZE IN HEIGHT OR D.B.H.	NO. OF TREES OR VOL. IN BD. FT.	TOTAL STAND LEFT	STEM INJURIES NO. : %	BROKEN TOPS NO. : %	
WHEEL LOGGING	YP	4-11" 12"+ 12"+	NO. NO. VOL.	97 351 335,700	2: 5: 3,770:	2.1: 1.4: 1.1:	0: 0.0 8: 2.3 1040: 0.3
HORSE- DRAWN							
BASIS 66.8 ACRES	WF	4-11" 12"+ 12"+	NO. NO. VOL.	1,244 996 262,343	30: 88: 23,220:	2.4: 8.8: 8.9:	36: 2.9 55: 5.5 6840: 0.3
STRIP SECTS.							
13 & 14 T 31 N R 9 E	TOTAL	4-11" 12"+ 12"+	NO. NO. VOL.	1,341 1,347 598,043	32: 93: 26,990:	2.4: 6.9: 4.5:	36: 2.7 63: 4.7 7880: 1.3
BOOM DONKEY LOGGING	YP	4-11" 12"+ 12"+	NO. NO. VOL.	42 80 61,288	3: 20: 15,080:	7.1: 25.0: 24.6:	2: 4.8 2: 2.5 1080: 1.8
BASIS 18.4 ACRES	WF	4-11" 12"+ 12"+	NO. NO. VOL.	266 196 48,280	30: 40: 13,160:	11.3: 20.4: 27.2:	4: 1.5 5: 2.5 470: 1.0
STRIP SECTS.							
12 & 13 T 31 N R 9 E	TOTAL	4-11" 12"+ 12"+	NO. NO. VOL.	310 276 109,568	33: 60: 28,240:	10.6: 21.7: 25.8:	6: 1.9 7: 2.5 1550: 1.4

TABLE NO. 6. DAMAGE IN BRUSH BURNING

 BASIS 0-3" 8.8 ACRES PLOTS
 4"+ 85.2 ACRES OF STRIP

SPEC- IES	SIZE IN HEIGHT OR D. B. H.	NO. OF TREES OR VOL. IN BD. FT.	TOTAL STAND LEFT	CAT NO. OR VOL.		FACED % VOL.		KILLED NO. OR VOL.	
				CAT NO.	FACED %	NO. OR VOL.	KILLED NO. OR VOL.		
YP	0-6'	NO.	441	-	-	-	81	18	
	6-3"	NO.	87	-	-	-	0	0	
	4-11"	NO.	241	-	-	-	8	3.3	
	12"+	NO.	431	-	-	-	1	0.2	
	12"+	VOL.	396,988	-	-	-	30	0.0+	
WF	0-6'	NO.	3,050	-	-	-	442	14	
	6-3"	NO.	951	-	-	-	42	4	
	4-11"	NO.	1,510	21	1.4	115	7.6		
	12"+	NO.	1,192	53	4.4	7	0.6		
	12"+	VOL.	310,623	15,270	4.9	1030	0.3		
TOTAL	0-6'	VOL.	3,491	-	-	-	523	15	
	6-3"	NO.	1,038	-	-	-	42	4	
	4-11"	NO.	1,751	21	1.2	123	7.0		
	12"+	NO.	1,623	53	3.3	8	0.5		
	12"+	VOL.	707,611	15,270	2.2	1060	0.1		

TABLE NO. 7. WINDFALL*LOSSES SINCE LOGGING
 Basis 100% Cruise Of Down Trees And 10% Cruise Of Living Trees.
 NO. OF TREES

	WINDFALL		TOTAL RESERVED STAND	
	YP	WF	YP	WF
12	3	4	483	2,824
14	2	11	552	2,251
16	-	8	311	1,488
18	-	12	290	1,282
20	-	10	250	1,090
22	-	9	280	849
24	-	10	230	680
26	-	4	330	404
28	-	5	260	425
30	-	4	301	273
32	-	3	230	193
34	-	1	210	11
36	-	1	231	80
38	-	-	160	30
40	-	-	90	10
Over	-	-	101	30
TOTAL :	5	82	4309	11,920

*Practically all windfall occurred on area logged in 1922 as there was practically no loss from this source during winter 1923-24.

TABLE NO. 8. PERCENT CUT AND PERCENT OF
FIR IN THE CUT AND RESERVED
STAND.

	BOARD FEET PER ACRE	%	PERCENT FIR
CUT	25,600°	75	45
LEFT	8,610°°	25	46
TOTAL	34,210	100	45

TABLE NO. 9. PERCENT OF FIR IN FUTURE
STAND
BASIS - 85.2 ACRES OF STRIP

REPRODUCTION	POLES 4-11" D.B.H	MERCH. STAND 12"
0-3" D.B.H.	ISOLATED, DOMINANT	D.B.H. AND OVER.
	AND CO-DOMINANT	ISOLATED, DOMINANT
	TREES	& CO-DOMINANT TREES
NO. OF TREES PER ACRE -----	449	11.22
% FIR -----	89	82
		13.10
		65

°Average for area logged 1922 and 1923, sections 12, 13 and 14, T 31 N, R 9 E, basis log scale.

°°Total stand left 85.2 acres strip, sections 12, 13 and 14, T 31 N, R 9 E. Includes all trees left in marking.